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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/007,270

11/08/2001

Gregory S. Hageman

020618-000120US

3566

20350

7590

08/23/2006

TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

SEHARASEYON, JEGATHEESAN

ART UNIT

PAPER NUMBER

1647

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/007,270	Applicant(s) HAGEMAN ET AL.	
	Examiner Jegatheesan Seharaseyon, Ph.D	Art Unit 1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 June 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10, 11, 21-25 and 27-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2, 3, 27 and 28 is/are allowed.
- 6) ☐ Claim(s) 1, 4, 5, 10, 11, 21-25 and 29-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Appendix A1-2, B and C1-2.</u> |

DETAILED ACTION

1. This office action is in response to the amendment and remarks filed on 6/7/06. Claims 29-31 have been amended. Claim 26 is canceled. Therefore, claims 1-5, 10-11, 21-25 and 27-31 are currently pending and are examined.

2. The text of those sections of Title 35, U. S. Code not included in this action can be found in a prior Office action.

3. Any objection or rejection of record, which is not expressly repeated in this action, has been overcome by Applicant's response and withdrawn.

4. The Office is withdrawing the allowance of claims 5, 10 and 11 due to the new grounds of rejections applied below.

Claim Objections

5. Claims 27 and 28 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 24 and 25. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claims 24 and 27 are both drawn to a polynucleotide segment of SEQ ID NO: 1 that is at least 1000 nucleotides in length. Similarly, Claims 25 and 28 are both drawn to a polynucleotide segment of SEQ ID NO: 1 that is at least 2000 nucleotides in length.

Claim Rejections - 35 USC § 112, first paragraph (maintained)

6. The rejection of claim 4 under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for nucleotides encoding a polypeptide of SEQ ID

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NO: 2, does not reasonably provide enablement for a complement encoding a polypeptide comprising at least 190 contiguous amino acids residues of SEQ ID NO: 2 is maintained for reasons set forth in the Office Action dated 1/31/06 (pages 6-11) and below. Wand's factors were discussed in the previous Office Action dated 1/13/06. Applicant in the response filed 6/7/06 has not indicated how complement will encode the polypeptide of SEQ ID NO: 2. As indicated previously there is a single polynucleotide disclosed with reference to IPM150 isoform A, SEQ ID NO: 2. There is no enabling disclosure to support a complementary sequence to encode a polypeptide of SEQ ID NO: 2. Despite knowledge in the art for producing a polypeptide the specification fails to provide any guidance regarding its complementary nucleotide sequences to encode polypeptide of SEQ ID NO: 2. Thus, undue amount of experimentation would be required to generate the polypeptide of SEQ ID NO: 2 using the complementary sequences. Claims 5, 10, 11 and 21-22 are rejected insofar as they depend from claim 4.

7. The rejection of claim 4 under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is maintained for reasons set forth in the Office Action dated 1/31/06 (pages 3-6) and below. Applicant in the response filed 6/7/06 has not indicated how complement will encode the polypeptide of SEQ ID NO: 2. The specification discloses the nucleotides of SEQ ID NO: 1 and nucleotides encoding SEQ ID NO: 2 (Page 10, paragraph 47). This meets the written

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description provisions of 35 USC 112, first paragraph. However, the specification does not disclose a complementary sequence that encodes a polypeptide comprising at least 190 amino acid residues of SEQ ID NO: 2 contemplated by the Applicant. The claims as written, however, encompass sequences which were not originally contemplated and fail to meet the written description provision of 35 USC 112, first paragraph because the written description is not commensurate in scope with the recitation of claim 4. The specification does not provide written description to support the genus encompassed by the instant claim. As a result, it does not appear that the inventors were in possession of complementary polynucleotide sequence set forth in claim 4. Therefore, only isolated polynucleotide encoding SEQ ID NO: 2 but not the full breadth of the claim meets the written description provision of 35 USC 112, first paragraph. Claims 5, 10, 11 and 21-22 are rejected insofar as they depend from claim 4.

Claim Rejections - 35 USC § 112(New)

8. Claims 1, 4, 5, 10, 11 and 21-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8a. Claim 1 is rejected as being indefinite because the claim recites "wherein said nucleic acid segment is 100 to 3330 nucleotides in length and has sequence identity to SEQ ID NO: 1". The Office is assuming that the nucleotide fragment contemplated could have any percentage identity to SEQ ID NO: 1, the claim is considered indefinite. Applicant can obviate the rejection by amending the claim to

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recite "wherein said nucleic acid segment is 100 to 3330 contiguous nucleotides of SEQ ID NO: 1". Claims 23-25 are rejected insofar as they depend from claim 1.

Claim Rejections - 35 USC § 102(New)

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9a. Claims 1 and 29-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Macke et al. (1996, Accession No.W26960).

Macke et al. (1996, Accession No.W26960) discloses a 561bp cDNA fragment (EST) from human retinal library. Claim 1 is drawn to polynucleotide comprising a nucleic acid segment or its complement that is 100 to 3330 nucleotides long that has identity to SEQ ID NO: 1. In addition, claims 29-31 are drawn to polynucleotide primers or probes comprising a nucleotide sequence that is identical to or complementary to SEQ ID NO: 1 and between 12 and 100 contiguous nucleotides in length. As can be seen in Appendix A, the EST fragment disclosed by Macke et al. contains at least

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300bp that are identical to SEQ ID NO: 1. Therefore, claims 1 and 29-31 are anticipated by Macke et al. (1996, Accession No.W26960).

9b. Claims 29-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Flor et al. (U. S. Patent No. 6, 228, 610).

Flor et al. discloses SEQ ID NO: 5 which has a 20bp fragment that is identical to 20 nucleotides of SEQ ID NO: 1 of the instant invention (see Appendix B). This 20mer sequence can be used as a primer or a probe. Therefore, claims 29-31 are anticipated by Flor et al. (U. S. Patent No. 6, 228, 610).

9c. Claims 1, 23 and 29-31 are rejected under 35 U.S.C. 102(a) as being anticipated by Felbor et al. (1998, Reference C10 on PTO1449 Of 2/05/2004, also Accession No. AF017776.1).

Felbor et al. (1998, Accession No.AF017776.1) discloses a 1235 bp cDNA fragment of human interphotoreceptor matrix gene (IPM150), exon 17. There is identity to about 700 nucleotides and appears not to be non-coding. . Claim 1 is drawn to polynucleotide comprising a nucleic acid segment or its complement that is 100 to 3330 nucleotides long that is identical to SEQ ID NO: 1. Further, claim 23, is drawn to polynucleotide comprising a nucleic acid segment that is at least 500 nucleotides long and that is identical to SEQ IDNO: 1. In addition, claims 29-31 are drawn to polynucleotide primers or probes comprising a nucleotide sequence that is identical to or complementary to SEQ ID NO: 1 and is between 12 and 100 contiguous nucleotides. As can be seen in Appendix C1-2 the cDNA fragment disclosed by Felbhor et al.

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contains at least 1235bp that identical to SEQ ID NO: 1. Therefore, claims 1 and 23, 29-31 are anticipated Felbor et al. (1998, Reference C10 on PTO1449 Of 2/05/2004, also Accession No.AF017776.1).

Conclusion

10. Claims 2, 3, 27 and 28 are allowable.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jegatheesan Seharaseyon, Ph.D whose telephone number is 571-272-0892. The examiner can normally be reached on M-F: 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brenda Brumback can be reached on 571-272-0961. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/007,270

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JS

Art Unit 1647,

August 10, 2006

Deborah Schlegel
Patent Examiner

1742 GACACCTAGATGAAATGCGATCTCTGACATCTCTGCGCCGATCTGCGTACCGAGACTCA 1801
1802 GCGAATATGTTTCTGCTCCAGATCATTTCTTGAGAGATACCACTCTGCTGCTGAGCTTTTAC 1861
361 TCGAATATGTTTCTGCTCCAGATCATTTCTTGAGAGATACCACTCTGCTGCTGAGCTTTTAC 420
1862 AGTATATCACCACCTAGTTCTATGACCATTTGCCCCCAAGGGCCGAGAGCTGTTAGTGTCTT 1921
421 AGTATATCACCACCTAGTTCTATGACCATTTGCCCCCAAGGGCCGAGAGCTGTTAGTGTCTT 480
1922 TCAGCTGCTGCTGTTGCTTAACATGCGCTT 1949
481 TCAGCTGCTGCTGTTGCTTAACATGCGCTT 508

RESULT 14
BX097138
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM

BX097138 472 bp mRNA linear EST 04-FEB-2003
BX097138 Soares retina N2b4HR Homo sapiens cDNA clone
IMAGE:190666, mRNA sequence.

BX097138
EST
Homo sapiens (human)

REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
Ebert, L., Hell, O., Hennig, S., Neubert, P., Partsch, E., Peters, M.,
Radelof, U., Schneider, D. and Korn, B.
Human Unigeneset - RZPD3
Unpublished (2003)
Contact: Ina Rolfs
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Im Neuenheimer Feld 580, D-69120 Heidelberg, Germany
RZPD; IMAGE:99811359.
RZPDLIB; I.M.A.G.E. cDNA Clone Collection;
Human Unigeneset - RZPD3 (RZPDLIB No.972)
http://www.rzpd.de/CloneCards/cgi-
bin/showLib.pl.cgi?responsefile=972
RZPD Deutsches Ressourcenzentrum fuer Genomforschung GmbH
Heubnerweg 6, D-14059 Berlin, Germany
Tel: +49 30 32639 101
Fax: +49 30 32639 111
www.rzpd.de
This clone is available royalty-free from RZPD;
contact RZPD (clone@rzpd.de) for further information. Seq primer:
M13r, Primer sequence: TTTCACAGCAACAGCTATGAC.

FEATURES
source
1. 472
/organism="Homo sapiens"
/mol_type="mRNA"
/db_xref="taxon:9606"
/clone="IMAGE:99811359 / IMAGE:190666"
/sex="male"
/tissue="retina"
/dev_stage="55 year old"
/lab_host="D110B (ampicillin resistant)"
/clone_lib="Soares retina N2b4HR"
/note="Organ: eye; Vector: pT73D (Pharmacia) with a
modified polylinker, site 1: Not I, Site 2: Eco RI, 1st
strand cDNA was primed with a Not I - oligo(dT) primer [5'
TGTTACCACTGAAAGTGGAGGCGCGCGCTTTTCTTTTCTTTT 3']
double-stranded cDNA was size selected, ligated to Eco RI
adapters (Pharmacia), digested with Not I and cloned into
the Not I and Eco RI sites of a modified pT73 vector
(Pharmacia). The retinas were obtained from a 55 year old
Caucasian and total cellular poly(A)+ RNA was extracted 6
hrs after their removal. The retina RNA was kindly
provided by Roderick R. McInnes M.D. Ph.D. from the

University of Toronto, Library constructed by Bento
Soares and M.Patima Bonaldo.

Query Match 14.28; Score 472; DB 13; Length 472;
Best Local Similarity 100.08; Pred. No. 2.98-94;
Matches 472; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

1307 GGCATATTCAGTTCACTGATGAAATTTGCTGATCATCTGCGAGCTTTGCTGTCGACGCC 1366
1 GGCATATTCAGTTCACTGATGAAATTTGCTGATCATCTGCGAGCTTTGCTGTCGACGCC 60
1367 AATCAGAGCTGCCACATCTTTTGTCTTATAACAGAGGATGCTACTTTGAGTCCAGAAC 1426
61 AATCAGAGCTGCCACATCTTTTGTCTTATAACAGAGGATGCTACTTTGAGTCCAGAAC 120
1427 TTCTCTCTGTTGAAACCCAGCTTGAGACATGACGAGGAGGAGGATGCTTACCTGACA 1486
121 TTCTCTCTGTTGAAACCCAGCTTGAGACATGACGAGGAGGAGGATGCTTACCTGACA 180
1487 CTCTTGTGCTTCCAGCTGCTATGCTGCTTACCTCTCTGTCAGAGGCTCCAGCTTTCTTTA 1546
181 CTCTTGTGCTTCCAGCTGCTATGCTGCTTACCTCTCTGTCAGAGGCTCCAGCTTTCTTTA 240
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241 TGGCATCAAGCATCTTCTCTGATGATCAAGGACCCAGATATCAATGGCCACTGACC 300
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301 AGCATATCTAGTACCGGGCTCACCATCCACCAGTGTATTTCTGCAATCAGCCAAC 360
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1727 GCGAAGATATGCTCAGACACCTAGATGAAATGGATCTGCTGACACTCTCTG 1778
421 GCGAAGATATGCTCAGACACCTAGATGAAATGGATCTGCTGACACTCTCTG 472

RESULT 15
W26960/c
LOCUS
DEFINITION
ACCESSION
VERSION
KEYWORDS
SOURCE
ORGANISM
REFERENCE
AUTHORS
TITLE
JOURNAL
COMMENT

W26960 561 bp mRNA linear EST 08-MAY-1996
1810 Human retina cDNA randomly primed sublibrary Homo sapiens
cDNA, mRNA sequence.

W26960
W26960.1 GI:1306188
EST
Homo sapiens (human)
Homo sapiens
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Homnidae; Homo.
Macke, J., Smallwood, P. and Nathans, J.
Adult Human Retina cDNA
Unpublished (1996)
Contact: Dr. Jeremy Nathans
Dr. Jeremy Nathans, Dept. of Molecular Biology and Genetics
Johns Hopkins School of Medicine
725 North Wolfe Street, Baltimore, MD 21205
Tel: 410 955 4678
Fax: 410 955 4827
Email: jeremy.nathans@jhu.edu
Clones from this library are NOT available.
PCR primers
FORWARD: CTTTGGACAAATTCAGCTGGTAAAT
BACKWARD: GAGTGGCTATGATGATTTCTTCCAGGGTAA
Seq primer: GCGTAAAGCAGAAGATT.
Location/Qualifiers
1. 561
/organism="Homo sapiens"
/mol_type="mRNA"

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 161496
LENGTH: 601
TYPE: DNA
ORGANISM: Human
US-09-949-016-161496

Query Match 0.6%, Score 20; DB 3; Length 601;
Best Local Similarity 100.0%; Pred. No. 30;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 36 AATATATAATTTTTCAC 55
DB 138 AATATATAATTTTTCAC 157

RESULT 9

US-08-617-785-5
Sequence 5, Application US/08617785E
Patent No. 6228610
GENERAL INFORMATION:
APPLICANT: Flor, Peter J.
APPLICANT: Kuhn, Renier
APPLICANT: Lindaur, Kristen
APPLICANT: Puttner, Irene
APPLICANT: Knopfel, Thomas

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4,
TITLE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/08/617,785E

EARLIER FILING DATE: 1996-03-19
EARLIER APPLICATION NUMBER: PCT/EP94/02991
EARLIER FILING DATE: 1994-09-07
EARLIER APPLICATION NUMBER: EPO 9416553.7
EARLIER FILING DATE: 1994-08-19
EARLIER APPLICATION NUMBER: EPO 93810663.0
EARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 5
LENGTH: 1399
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(270)

FEATURE:
NAME/KEY: unsure
LOCATION: (920)..(1090)
OTHER INFORMATION: Nucleotides designated as n could be a or g or c
OTHER INFORMATION: or t/u

US-08-617-785-5
Query Match 0.6%, Score 20; DB 3; Length 1399;
Best Local Similarity 100.0%; Pred. No. 30;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1201 CATGGACCATGGAGGAGGA 1220
DB 283 CATGGACCATGGAGGAGGA 302

RESULT 10

US-09-817-464-5
Sequence 5, Application US/09817464
Patent No. 6515107
GENERAL INFORMATION:
APPLICANT: Flor, Peter J.
APPLICANT: Kuhn, Renier
APPLICANT: Lindaur, Kristen
APPLICANT: Puttner, Irene
APPLICANT: Knopfel, Thomas

TITLE OF INVENTION: Human Metabotropic Glutamate Receptor Subtypes (HMR4,
TITLE OF INVENTION: HMR6, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/09/817,464

TITLE OF INVENTION: HMR5, HMR7) and Related DNA Compounds
FILE REFERENCE: 4-19679/A/PCT
CURRENT APPLICATION NUMBER: US/09/817,464

EARLIER FILING DATE: 2001-03-26
EARLIER APPLICATION NUMBER: US/08/617,785
EARLIER FILING DATE: 1996-03-19
EARLIER APPLICATION NUMBER: EPO 9416553.7
EARLIER FILING DATE: 1994-08-19
EARLIER APPLICATION NUMBER: EPO 93810663.0
EARLIER FILING DATE: 1993-09-20
NUMBER OF SEQ ID NOS: 26
SOFTWARE: PatentIn Ver. 2.0

SEQ ID NO 5
LENGTH: 1399
TYPE: DNA
ORGANISM: Homo sapiens
FEATURE:
NAME/KEY: CDS
LOCATION: (1)..(270)

FEATURE:
NAME/KEY: unsure
LOCATION: (920)..(1090)
OTHER INFORMATION: Nucleotides designated as n could be a or g or c
OTHER INFORMATION: or t/u

US-09-817-464-5
Query Match 0.6%, Score 20; DB 3; Length 1399;
Best Local Similarity 100.0%; Pred. No. 30;
Matches 20; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1201 CATGGACCATGGAGGAGGA 1220
DB 283 CATGGACCATGGAGGAGGA 302

RESULT 11

US-07-977-434-11/c
Sequence 11, Application US/07977434
Patent No. 5466591
GENERAL INFORMATION:
APPLICANT: Gelfand, David H.
APPLICANT: Abramson, Richard D.

TITLE OF INVENTION: 5' TO 3' EXONUCLEASE MUTATIONS OF
TITLE OF INVENTION: THERMOSTABLE DNA POLYMERASES
NUMBER OF SEQUENCES: 38
CORRESPONDENCE ADDRESS:
ADDRESSEE: Hoffmann-La Roche Inc.
STREET: 340 Kingsland Street
CITY: Nutley
STATE: New Jersey
ZIP: 07110-1199

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Macintosh
OPERATING SYSTEM: 7
SOFTWARE: WordPerfect 2.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/977,434

FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,490
FILING DATE: 28-SEP-1990

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,466
FILING DATE: 28-SEP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,213

PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 523,394
FILING DATE: 15-MAY-1990
PRIOR APPLICATION DATA:

misc_feature	83851..83962	fragment_chain:7"
misc_feature	83851..83962	/notes="assembly_fragment:01026"
misc_feature	83851..83962	fragment_chain:8"
misc_feature	83851..83962	93063..106092
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misc_feature	83851..83962	128704..132145
misc_feature	83851..83962	/notes="assembly_fragment:01290"
ORIGIN		
Query Match 24.7% Score 823.6; DB 14; Length 132145;		
Best Local Similarity 97.8%; P-Id. No. 2,3e-176;		
Matches 835; Conservative 0; Mismatches 19; Indels 0; Gaps 0;		
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DB	39723	TTCTTAGTCTTAAAACTATTCTCTTCAGGTAAATCAGTAAAGGAAATTCGAAATTAC 39782
QY	2537	TGACCGTAGAATATGAAGAATTTAAACCATCAAGATTTGGGAAGGAAATTTAAAACTGAAAA 2596
DB	39783	TGACCGTAGAATATGAAGAATTTAAACCATCAAGATTTGGGAAGGAAATTTAAAACTGAAAA 39842
QY	2597	TGTACAAATTACCTTAGGCTATCTCAAGAGAGATGATTTGCCCTTCTCAAGGAAAAATGGA 2656
DB	39843	TGTACAAATTACCTTAGGCTATCTCAAGAGAGATGATTTGCCCTTCTCAAGGAAAAATGGA 39902
QY	2657	GACAGGCATATTCATGGCTCATCAAAATCCAGACATACGTCAACACTGAGATCAGCAC 2716
DB	39903	GACAGGCATATTCATGGCTCATCAAAATCCAGACATACGTCAACACTGAGATCAGCAC 39962
QY	2717	ACACATATTTCAAATATAGAGAGATGATGTACTTGGCAACCAAGTAAATTCGAAAAAAA 2776
DB	39963	ACACATATTTCAAATATAGAGAGATGATGTACTTGGCAACCAAGTAAATTCGAAAAAAA 40022
QY	2777	AGACACTTACTTATATTAACCAATGCAATCAGCGAAACATATTTTACTATTCT 2836
DB	40023	AGACACTTACTTATATTAACCAATGCAATCAGCGAAACATATTTTACTATTCT 40082
QY	2837	TGGATGATGTCAAAATGATCATATAGCAGGTGTTGCTTCCACCTTCCTGAAATTTTAC 2896
DB	40083	TGGATGATGTCAAAATGATCATATAGCAGGTGTTGCTTCCACCTTCCTGAAATTTTAC 40142
QY	2897	TCAAGATCATTTGCAACAGCATAGCTTACTTATGTTTAGGCACTGAACCAATTTATTG 2956
DB	40143	TCAAGATCATTTGCAACAGCATAGCTTACTTATGTTTAGGCACTGAACCAATTTATTG 40202
QY	2957	GGAAGCAAACTCTTTATGCTAGAAAGTACATTTTAAAGATGACTACTTACGCGGGAG 3016
DB	40203	GGAAGCAAACTCTTTATGCTAGAAAGTACATTTTAAAGATGACTACTTACGCGGGAG 40262
QY	3017	ATGCAAGTCTCTTAAACCGCATGATGATGTAGTGTAGGCACTGTAGTGAAGTATA 3076
DB	40263	ATGCAAGTCTCTTAAACCGCATGATGATGTAGTGTAGGCACTGTAGTGAAGTATA 40322
QY	3077	TATGCTCCAGACTACGCTGTATTAACACAAACCTCAGTATTTCAGTTATTAGGCACTAG 3136
DB	40323	TATGCTCCAGACTACGCTGTATTAACACAAACCTCAGTATTTCAGTTATTAGGCACTAG 40382
QY	3137	TTTTATAGCAACTACTGCTTACATAGTAGACTGTTTGTGTGCAATATCTTGAATTG 3196
DB	40383	TTTTATAGCAACTACTGCTTACATAGTAGACTGTTTGTGTGCAATATCTTGAATTG 40442

